Trend Study 18-25-02

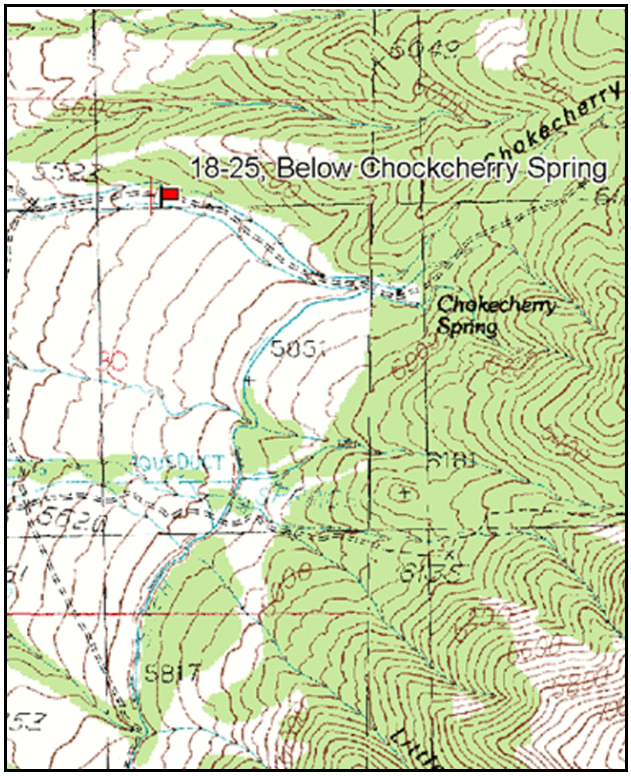
Study site name: Below Chokecherry Spring . Vegetation type: Big Sagebrush-Grass .

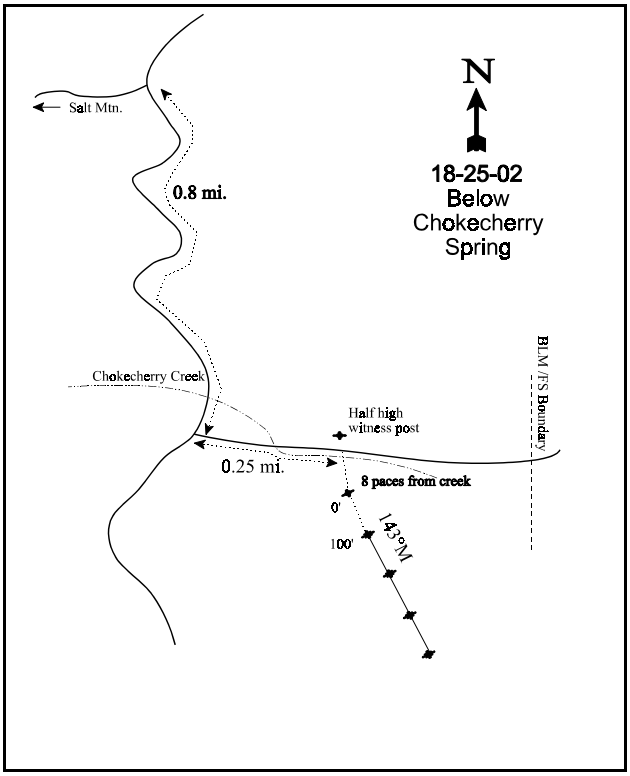
Compass bearing: frequency baseline 143 degrees magnetic.

Frequency belt placement: line 1 (11 & 95), line 2 (34ft), line 3 (59ft), line 4 (71ft).

LOCATION DESCRIPTION

Turn off the highway between mile mark 24 and 25. From the highway, go 2.7 miles staying right on the main road to Delle Ranch ponds and trees. The road then turns south. From Delle Ranch, proceed south towards Salt Mountain for 0.25 miles a fence. Continue for 1.9 miles to an intersection to the left (east) heading to Chokecherry Springs. There will be a red post on the east side of the intersection. Go 0.25 miles along the creek. From this point, walk south across the creek bed into the chaining where the study is located. From a large juniper growing down in the creek bed, the 0-foot baseline stake is 8 paces away bearing 171 degrees magnetic. Browse tag number 3924 is attached to the 0-foot marker of the baseline.





Map Name: Salt Mountain

Township 3S , Range 7W , Section 30

Diagrammatic Sketch

GPS: NAD 27, UTM 12S 4487997 N 358200 E

DISCUSSION

Below Chokecherry Spring - Trend Study No. 18-25

This study is located one-half mile west of Chokecherry Spring on a low lying alluvial site near an intermittent drainage channel. The site has a gently sloping (5%) west aspect and an elevation of 5,600 feet. The study samples a large mountain big sagebrush site surrounded by pinyon and juniper trees. The pinyon-juniper woodland was apparently chained and seeded in the past. However, the site in 1983 was thought to resemble more a pure mountain big sagebrush stand with a dense understory of cheatgrass brome. In 1983, frequency of pellet groups indicated a moderate intensity of winter deer use. According to the local conservation officer at the time, 400 to 500 deer customarily wintered in this area. In 1997, this was not the case with mostly light wildlife use noted on sagebrush and a low frequency of deer pellet groups (11%). Summer cattle grazing was noted as heavy in 1983, although little succulent forage was available after cheatgrass brome had cured. Now, it appears that grazing is not as intense as it has been in the past. Pellet group transect data from 2002 estimated 29 deer days use/acre (73 ddu/ha) and 14 cow days use/acre (34 cdu/ha). Cattle pats encountered appeared to be from the previous grazing season (2001).

Soil is alluvially deposited and gravelly in texture. Textural analysis indicates a loam with a neutral to mildly alkaline reaction (pH 7.3). Effective rooting depth is almost 13 inches deep with an average soil temperature of 61° F. Phosphorus is low at only 6.3 ppm. Values less than 10 ppm could be a limiting factor to plant establishment and development. Litter cover is moderately high and there is little exposed bare ground. Erosion is not a significant problem because of gentle slope and protective herbaceous cover. The erosion condition class was determined as stable in 2002.

In 1983, browse composition was described as consisting of a "sparse," but nonetheless ecologically dominant stand of mountain big sagebrush. Its density at that time was only estimated at 966 plants/acre. In 1989, density was estimated at only 1,332 plants/acre. Because of the previous poor location and size of the sampling grid, the baseline was lengthened in 1997, providing a much larger more accurate sample. The mountain big sagebrush population was estimated at 10,840 plants/acre in 1997 and 10,920 plants/acre in 2002. Quite a change in what was originally estimated on the site. The structure of the population is dynamic with abundant young plants sampled in 1997 and 2002. Utilization of sagebrush has been mostly light since 1983. Plants are vigorous and there are few decadent individuals. Annual leader growth was good in 2002 averaging two inches.

Broom snakeweed was very abundant in 1983 and 1989 with densities of 15,556 and 12,999 plants/acre respectively. The dynamic young population has become mostly mature and density was estimated at 2,900 plants/acre in 1997 and 2,120 in 2002. Some of the change in density is due to the much larger sample used in 1997 and 2002. Other browse that occur occasionally or rarely are white-stemmed rubber rabbitbrush, stickyleaf low rabbitbrush, and antelope bitterbrush.

Although there is a moderate density of perennial grasses, they initially produced relatively little forage and vigor was somewhat suppressed as a result of heavy grazing use by cattle. The most abundant grass on the site was originally cheatgrass brome, but in 2002, crested wheatgrass contributed the most cover. Forbs, especially perennials, have a diverse composition yet most species occur only occasionally. The only abundant species is peavine which provided 78% of the total forb cover in 2002. All forbs combined provided only 15% and 16% of the total herbaceous cover respectively in 1997 and 2002.

1983 APPARENT TREND ASSESSMENT

Soil trend appears stable, principally because of the gentle terrain. Vegetative trend indicators suggest a slowly improving mountain big sagebrush population, a rapidly increasing population of broom snakeweed, and a depleted herbaceous understory dominated by a thick cover of cheatgrass. The cheatgrass represents a significant and distinct fire hazard. Perennial grasses are doing poorly and show little evidence of improvement.

1989 TREND ASSESSMENT

The increase in vegetation and cryptogamic cover, and the decrease in percent bare soil to 10% all point to an improving soil trend. Sagebrush has good vigor, fair production and cover averages 16%. It appears to have increased significantly along the baseline, while the density plots related a slower growth in the population. The 1989 density estimates remain relatively low for a sagebrush stand (1,333 plants/acre) with 73% classified as mature plants. There are a few young plants (10%) and although not encountered on the density plots, many large sagebrush were observed to have high number of seedlings nearby. Considering the number of pellet groups and the apparent importance of this area as deer winter range, there is light browsing on the sagebrush. Broom snakeweed shows a slight decrease in numbers, but changes in age structure for this short-lived shrub suggest a decline in the future. Trend for browse is believed to be stable at this time. The trend for the herbaceous understory is slightly improving with a decrease in the dominance of cheatgrass and an increase for crested wheatgrass and Sandberg bluegrass. Forbs are still a minor component of the herbaceous understory.

TREND ASSESSMENT
soil - up (5)
browse - stable (3)
herbaceous understory - slightly upward (4)

1997 TREND ASSESSMENT

The trend for soil is continuing to show improvement with increased cryptogamic cover and decreased bare soil (down to 3%). Herbaceous cover now makes up 65% of the total vegetative cover. The trend for mountain big sagebrush which makes up 83% of the browse cover is up. Decadence decreased, vigor remains good, and use is mostly light. Young plants make up 68% of the population. The trend for the herbaceous species is stable but the composition has changed. Crested wheatgrass has increased significantly in nested frequency and now is the most abundant grass. Sandberg bluegrass has declined significantly in frequency. Cheatgrass is still abundant, providing 32% of the total grass cover. The perennial component for forbs has remained stable.

TREND ASSESSMENT
soil - up (5)
browse - up (5)
herbaceous understory - stable (3)

2002 TREND ASSESSMENT

Trend for soil is stable with similar ground cover characteristics compared to 1997. There is little bare soil (3%) and ample protective ground cover to prevent erosion. Trend for mountain big sagebrush is also stable. Density remains moderately high at 10,920 plants/acre with a total cover value of almost 19%. Utilization is light, vigor good, and decadence low. Trend for the herbaceous understory is stable. Sum of nested frequency for perennial grasses has remained stable with frequency of perennial forbs declining. Nested frequency of crested wheatgrass increased significantly while frequency of Sandberg bluegrass declined significantly. Crested wheatgrass now provides 62% of the total grass cover. Cheatgrass is still abundant but it declined significantly in nested frequency. Forbs are diverse but few are common. Twenty-three forb species were sampled in 1997, but due to drought conditions, only 11 species were sampled in 2002. However, the most abundant forb, peavine, which provided 78% of the forb cover in 2002, remained stable.

TREND ASSESSMENT
soil - stable (3)
browse - stable (3)
herbaceous understory - stable (3)

HERBACEOUS TRENDS --
Herd unit 18 , Study no: 25

Type	Species	Nested Frequency				Quadrat Frequency				Average Cover %	
		'83	'89	'97	'02	'83	'89	'97	'02	'97	'02
G	Agropyron cristatum	a57	a96	b169	c241	26	36	58	77	12.91	20.81
G	Agropyron spicatum	ab7	ab4	b14	a-	3	1	6	-	.27	-
G	Bromus japonicus (a)	-	-	3	9	-	-	1	3	.00	.01
G	Bromus tectorum (a)	-	-	b261	a163	-	-	80	49	9.35	6.71
G	Poa bulbosa	a-	a-	a-	b45	-	-	-	18	-	2.37
G	Poa fendleriana	a-	b37	a2	a-	-	14	1	-	.03	-
G	Poa secunda	b184	c281	b214	a131	68	95	77	50	6.39	3.82
G	Sitanion hystrix	7	6	2	-	3	5	1	-	.03	-
G	Sporobolus cryptandrus	-	2	1	-	-	1	1	-	.03	-
Total for Annual Grasses		0	0	264	172	0	0	81	52	9.36	6.72
Total for Perennial Grasses		255	426	402	417	100	152	144	145	19.69	27.00
Total for Grasses		255	426	666	589	100	152	225	197	29.05	33.73
F	Agoseris glauca	-	4	-	3	-	2	-	2	.00	.03
F	Alyssum alyssoides (a)	-	-	-	3	-	-	-	1	-	.00
F	Allium spp.	A8	b81	b73	a3	5	30	36	2	.61	.01
F	Antennaria rosea	-	3	-	-	-	1	-	-	-	-
F	Artemisia ludoviciana	3	1	-	-	1	1	-	-	-	-
F	Astragalus spp.	-	-	7	-	-	-	3	-	.04	-
F	Astragalus utahensis	-	-	3	-	-	-	1	-	.03	-
F	Calochortus nuttallii	7	6	6	-	4	4	3	-	.02	-
F	Cirsium neomexicanum	3	-	7	-	1	-	3	-	.19	-
F	Collinsia parviflora (a)	-	-	85	97	-	-	37	34	.18	.52
F	Crepis acuminata	-	2	-	-	-	2	-	-	-	-
F	Descurainia spp. (a)	-	-	11	-	-	-	4	-	.02	-
F	Draba spp. (a)	-	-	b22	a3	-	-	10	1	.05	.00
F	Epilobium brachycarpum (a)	-	-	5	-	-	-	3	-	.01	-
F	Erodium cicutarium (a)	-	-	5	8	-	-	2	3	.01	.01
F	Hackelia patens	4	4	10	-	2	2	5	-	.35	-
F	Helianthus spp.	-	4	-	-	-	2	-	-	-	-
F	Holosteum umbellatum (a)	-	-	55	56	-	-	22	22	.13	.33
F	Lathyrus brachycalyx	b207	a149	a139	a150	86	65	56	58	3.36	5.82
F	Lactuca serriola	a-	b26	a-	a-	a-	11	-	-	-	-
F	Lomatium spp.	A-	a-	a-	b31	-	-	-	11	.00	.57
F	Lygodesmia spp.	-	-	2	-	-	-	1	-	.00	-
F	Microsteris gracilis (a)	-	-	2	3	-	-	1	2	.00	.01
F	Phlox longifolia	a13	b55	b54	ab37	5	26	22	19	.40	.14
F	Polygonum douglasii (a)	-	-	3	-	-	-	2	-	.01	-

Type	Species	Nested Frequency				Quadrat Frequency				Average Cover %	
		'83	'89	'97	'02	'83	'89	'97	'02	'97	'02
F	Ranunculus testiculatus (a)	-	-	19	-	-	-	7	-	.03	-
F	Taraxacum officinale	$_{ab}$3	$_{ab}$4	$_{b}$14	$_{a}$-	1	3	5	-	.05	-
F	Tragopogon dubius	$_{a}$3	$_{b}$23	$_{b}$33	$_{a}$-	2	13	18	-	.17	-
F	Veronica biloba (a)	-	-	$_{b}$19	$_{a}$-	-	-	6	-	.05	-
Total for Annual Forbs		0	0	226	170	0	0	94	63	0.51	0.88
Total for Perennial Forbs		251	362	348	224	107	162	153	92	5.25	6.58
Total for Forbs		251	362	574	394	107	162	247	155	5.77	7.46

Values with different subscript letters are significantly different at alpha = 0.10

BROWSE TRENDS --
Herd unit 18 , Study no: 25

Type	Species	Strip Frequency		Average Cover %	
		'97	'02	'97	'02
B	Artemisia tridentata vaseyana	85	89	15.28	18.18
B	Chrysothamnus nauseosus albicaulis	10	8	.40	.36
B	Chrysothamnus viscidiflorus viscidiflorus	26	17	1.98	1.09
B	Gutierrezia sarothrae	50	41	.79	1.90
B	Juniperus osteosperma	2	0	-	.56
Total for Browse		173	155	18.47	22.11

CANOPY COVER -- LINE INTERCEPT
Herd unit 18 , Study no: 25

Species	Percent Cover	
	'97	'02
Artemisia tridentata vaseyana	-	18.58
Chrysothamnus nauseosus albicaulis	-	.33
Chrysothamnus viscidiflorus viscidiflorus	-	1.08
Gutierrezia sarothrae	-	1.92
Juniperus osteosperma	-	2.33

Key Browse Annual Leader Growth
Herd unit 18 , Study no: 25

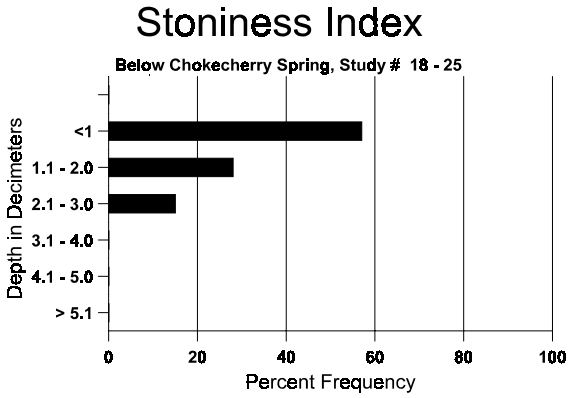
Species	Average leader growth (in)
	'02
Artemisia tridentata vaseyana	2.0

BASIC COVER --
Herd unit 18 , Study no: 25

Cover Type	Nested Frequency		Average Cover %			
	'97	'02	'83	'89	'97	'02
Vegetation	371	384	.25	10.25	53.84	60.31
Rock	86	94	1.75	3.00	2.17	3.63
Pavement	168	153	1.75	1.50	1.57	1.81
Litter	396	391	70.00	71.75	54.59	50.27
Cryptogams	190	133	0	3.25	6.73	2.73
Bare Ground	118	117	26.25	10.25	2.66	2.91

SOIL ANALYSIS DATA --
Herd Unit 18, Study no: 25, Below Chokecherry Spring

Effective rooting depth (in)	Temp °F (depth)	pH	%sand	%silt	%clay	%0M	PPM P	PPM K	dS/m
12.5	60.5 (10.5)	7.3	44.0	31.4	24.6	3.2	6.3	236.8	0.6



PELLET GROUP FREQUENCY --
Herd unit 18 , Study no: 25

Type	Quadrat Frequency		Pellet Transect	
	'97	'02	Pellet Groups per Acre ⁄02	Days Use per Acre (ha) ⁄02
Rabbit	44	31	-	-
Elk	1	1	-	-
Deer	11	16	383	29 (73)
Cattle	11	4	165	14 (34)

BROWSE CHARACTERISTICS --
Herd unit 18 , Study no: 25

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Artemisia tridentata vaseyana																		
S	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	121	-	-	-	-	-	-	-	-	121	-	-	-	2420			121
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
Y	83	10	-	-	-	-	-	-	-	-	10	-	-	-	333			10
	89	4	-	-	-	-	-	-	-	-	2	2	-	-	133			4
	97	344	23	-	-	-	-	-	-	-	367	-	-	-	7340			367
	02	140	7	-	-	-	-	-	-	-	146	1	-	-	2940			147
M	83	19	-	-	-	-	-	-	-	-	19	-	-	-	633	29	37	19
	89	25	3	1	-	-	-	-	-	-	25	4	-	-	966	27	38	29
	97	81	79	1	-	-	-	-	-	-	155	-	6	-	3220	26	41	161
	02	342	33	3	-	-	-	-	-	-	375	3	-	-	7560	20	23	378
D	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	2	5	-	-	-	-	-	-	-	4	3	-	-	233			7
	97	8	5	-	-	-	1	-	-	-	10	-	-	4	280			14
	02	16	1	-	-	4	-	-	-	-	12	-	-	9	420			21
X	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	-	-	-	-	-	-	-	-	-	-	-	-	-	140			7
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	420			21

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'83	00%	00%	00%	+27%
'89	20%	03%	00%	+88%
'97	20%	.36%	02%	+ 1%
'02	08%	.54%	02%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'83	966	Dec:	0%
	'89	1332		17%
	'97	10840		3%
	'02	10920		4%

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Chrysothamnus nauseosus albicaulis																		
S	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
Y	83	1	-	-	-	-	-	-	-	-	1	-	-	-	33			1
	89	1	-	-	-	-	-	-	-	-	-	1	-	-	33			1
	97	13	-	-	-	-	-	-	-	-	13	-	-	-	260			13
	02	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
M	83	1	-	-	-	-	-	-	-	-	1	-	-	-	33	39	77	1
	89	3	-	-	-	-	-	-	-	-	3	-	-	-	100	41	63	3
	97	9	-	-	-	-	-	-	-	-	9	-	-	-	180	21	23	9
	02	3	-	1	-	-	-	-	-	-	4	-	-	-	80	25	31	4
D	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
	02	1	-	-	-	1	-	1	-	-	2	-	-	1	60			3
X	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	40			2

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'83	00%	00%	00%	+50%
'89	00%	00%	00%	+71%
'97	00%	00%	00%	-65%
'02	13%	13%	13%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'83	66	Dec:	0%
	'89	133		0%
	'97	460		4%
	'02	160		38%

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Chrysothamnus viscidiflorus viscidiflorus																		
Y	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	3	-	-	-	-	-	-	-	-	3	-	-	-	100			3
	97	8	-	-	-	-	-	-	-	-	8	-	-	-	160			8
	02	1	-	-	-	-	-	-	-	-	-	-	1	-	20			1
M	83	2	-	-	-	-	-	-	-	-	2	-	-	-	66	16	14	2
	89	2	-	-	-	-	-	-	-	-	2	-	-	-	66	15	23	2
	97	56	1	-	-	-	-	-	-	-	57	-	-	-	1140	16	25	57
	02	32	-	-	2	-	-	-	-	-	26	6	2	-	680	18	22	34
D	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
	02	7	-	-	-	-	-	-	-	-	2	-	1	4	140			7
X	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	40			2

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'83	00%	00%	00%	+60%
'89	00%	00%	00%	+87%
'97	02%	00%	00%	-36%
'02	00%	00%	19%	

Total Plants/Acre (excluding Dead & Seedlings)			Dec:
'83	66		0%
'89	166		0%
'97	1320		2%
'02	840		17%

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Gutierrezia sarothrae																		
S	83	52	-	-	-	-	-	-	-	-	52	-	-	-	1733			52
	89	24	-	-	-	-	-	-	-	-	24	-	-	-	800			24
	97	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
Y	83	405	-	-	-	-	-	-	-	-	405	-	-	-	13500			405
	89	70	-	-	-	-	-	-	-	-	67	-	3	-	2333			70
	97	15	-	-	-	-	-	-	-	-	15	-	-	-	300			15
	02	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
M	83	62	-	-	-	-	-	-	-	-	61	1	-	-	2066	13	13	62
	89	232	-	-	-	-	-	-	-	-	216	16	-	-	7733	13	11	232
	97	126	-	-	-	-	-	-	-	-	126	-	-	-	2520	10	10	126
	02	72	-	-	-	-	-	-	-	-	72	-	-	-	1440	9	10	72
D	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	88	-	-	-	-	-	-	-	-	46	3	-	39	2933			88
	97	4	-	-	-	-	-	-	-	-	4	-	-	-	80			4
	02	32	1	-	-	-	-	-	-	-	14	-	11	8	660			33
X	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	-	-	-	-	-	-	-	-	-	-	-	-	-	20			1
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	280			14

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'83	00%	00%	00%	-16%
'89	00%	00%	11%	-78%
'97	00%	00%	00%	-27%
'02	.94%	00%	18%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'83	15566	Dec:	0%
	'89	12999		23%
	'97	2900		3%
	'02	2120		31%

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Juniperus osteosperma																		
Y	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
M	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	97	1	-	-	-	-	-	-	-	-	-	-	-	1	20	-	-	1
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
X	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	-	-	-	-	-	-	-	-	-	-	-	-	-	80			4
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'83	00%	00%	00%	
'89	00%	00%	00%	
'97	00%	00%	50%	
'02	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'83	0	Dec:	-
	'89	0		-
	'97	40		-
	'02	0		-

Purshia tridentata																			
M	83	-	-	2	-	-	-	-	-	-	1	-	1	-	66	14	24	2
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	97	-	-	-	-	-	-	-	-	-	-	-	-	-	0	15	55	0
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
D	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	1	-	-	-	-	-	-	-	-	-	1	33			1
	97	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'83	00%	100%	50%	-50%
'89	00%	100%	100%	
'97	00%	00%	00%	
'02	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'83	66	Dec:	0%
	'89	33		100%
	'97	0		0%
	'02	0		0%